

Supercharging District Success With Data-driven Decision Making

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Message from the CEO: Modeling Data Leadership

As pioneers in a fast-paced, dynamic sector, educators are tackling data leadership with energy and commitment. As leaders develop tools and get more practiced at using them, it can be tempting to turn every decision into an exercise in data analysis. In response to that temptation, it's good to remember the saying that, **"not everything we measure matters, and not everything that matters can be measured."**

Data-driven decisions are an excellent part of intelligent leadership, but intelligence is not the only trait we need to improve performance. We also need wisdom to decide which data is important. We need compassion to turn off the display and listen to a frightened teacher who fears his students' performance is a reflection on him. We need leaders who know how to use data, and when not to.

One of the key messages I learned from our panel of experts is that people are highly capable of finding meaning in even complicated data environments. When we provide training and a common data vocabulary, we can gain a tremendous return on investment by crowdsourcing data analysis to confident staff members. Even parents and students are fully capable of constructing (and thereby internalizing) meaning from raw or unfiltered data.

Our challenge as leaders is to lead a data culture where decisions are driven by data, but data is driven by people. Human intuition and insight are still the most important traits of leadership, and data intelligence is best when we preserve a strong human factor. Starting the conversation with your staff and supervisors by asking them how they use data. Ask them what data they wish they had. Connect with parents and families to see what they already know, what they need to know, and what they wish they could figure out in the future. Then, find systems, platforms, and training that can help all your stakeholders realize the promise of data, delivered.

Vlada Lotkina CEO & Co-founder, ClassTag Inc.



Intelligent Data Leadership Personified

Leading a data-intelligent culture where educators make data-driven decisions is challenging and unpredictable. The proliferation of digital systems to track every aspect of district and school operations means that many educators have more data than they know what to do with. At the same time, there may be critical gaps in data collection that lead to missed opportunities or decisions that are not fully informed.

To understand how role model leaders are using data to enhance family engagement and raise student achievement, we recently sought the insight of ten distinguished principals and district leaders who have earned recognition for their demonstrated excellence in data leadership. Here are those leaders, and their unique perspectives:



Rachel Hathhorn is Director of Communications for the Pine-Richland School District in Pennsylvania, one of only four districts to earn top recognition from the Alliance for Performance Excellence. Rachel brings a wealth of experience from broadcast media and district communications.



Bret Domstrand is the 2020 National Distinguished Principal from Lake Marion Elementary in Minnesota—a national Blue Ribbon Award-winning school. With a background in special education and a degree in educational leadership, Brett is an advocate for equity and access.



Dr. Dilhani Uswatte was named Alabama's National Distinguished Principal in 2020, and is a prior recipient of the National Milken Award. As principal at Rocky Ridge Elementary School in Alabama, "Dr. Dil" is passionate about using data to drive improvement for all students.



Dr. Maya Roth-Bisignano was the founding high school principal with Uncommon Schools—a network of high-performing charter schools in the Northeast. A prolific speaker and author, Maya earned the Blackboard Award for Academic Excellence, and has continued to advocate for school choice and excellence.

CLASSTAG CONNECT



Ron Redden is the Assistant Superintendent of Compliance and Data Quality for the Brazosport Independent School District in Texas. Under his leadership, the district delivers transparent public data reports that have helped earn an A rating for school growth on the Texas quality system.



Dr. Shala Flowers is Assistant Superintendent of School Improvement and Campus Leadership for A+ Charter Schools, a network of Texas charter schools that is now operating in its third decade. In her work, Shala has earned recognition as a "Courageous Principal" and an expert in applied data analysis.



Stacey Eger-Converse is Assistant Superintendent for Instruction and Chief Diversity Officer for the Watertown City School District in New York. In her role, Stacey oversees district-family communication. She is also membership chair for Project Lead, a community philanthropic foundation.



Heather Anguiano is principal at Hartford Sylvia Encinas Elementary in Arizona. As a bilingual educator and student advocate, Heather was recognized in 2018 as an Exemplary Principal in Maricopa County. Heather serves on multiple social service agency and non -profit boards that impact the families of Hartford students.



Steve Guglich is principal of Missouri Ridge, an elementary and middle school in North Dakota. Steve began as a traditional middle school principal and then advocated for the multi-level school he now leads. In recognition of his leadership, Steve was honored as a ND regional Principal of the Year.



Vicki Wilson is the 2020 National Distinguished Principal from Homer Elementary in Oklahoma. Throughout her career, Vicki has been a pioneer in using technology to drive academic engagement, and using data to prioritize program improvements.

Experts' I.D.E.A.S. for Effective Data-Driven Decision Making

Most schools generate a wealth of data, yet many educators sympathize with being data rich and information poor. Translating raw data into actionable information depends on consistent practices that build data intelligence. One of the benefits of learning from a collection of experts is that best practices rise to the top through agreement and reinforcement. No matter what data you are using, our data champions agree on five key ideas to supercharge your process and make sure you gain the maximum value possible.



Integrity // Data integrity refers to qualities of accuracy and consistency, especially when data travels across multiple systems. To ensure that reports are compliant and decisions are justified, leaders have to ensure that data values are accurate and maintain integrity as they are exported, imported, translated and analyzed.

Application // Proper examination helps translate data from analysis to application. Using specific data-driven insights to answer specific questions or make key decisions is the heart of effective application. Without application, data insights can remain theoretical and demotivate data users. **Democratization** // When data is reserved for the "experts" regular users are less motivated to look for meaningful patterns or monitor the impact of alternative solutions. Data democratization gives "power to the people" who are using data to set priorities and make decisions.

Simplification // The quantity of raw data can be overwhelming, and too much data can be just as problematic as too little. Using simplified visualization strategies along with training in data literacy can make data easy to use, simple to communicate, and familiar to all stakeholders. **Examination** // Like any specialized analysis, data examination requires a common vocabulary and purposebuilt tools. The process of data examination is highly dependent on the requirements of users and decision makers.

Integrity

Without integrity, data analysis and application is not just misinformed, it can lead to adverse decisions and even violations of law or ethics. Data integrity is more than desirable, it's a basic requirement of governance and leadership. Our expert panel offers action steps to support data integrity:

- As much as possible, **use data in its original context**. If attendance is normally collected and represented in a table, then reproduce that table during data discussions.
- Provide a glossary or legend that explains acronyms and technical terms.
- Provide samples of analyzed data as a template for training or practice.
- Create standard data analysis questions and use them consistently.
- Be consistent about using similar scales, averages, and other frameworks.
- If you translate data into a new format, be transparent about the conversion method.



You have to understand what the data is telling us. MAP for instance, an overall score tells me one thing but I want to dig deeper to know the substrands. That informs the instructional decisions.

Bret Domstrand



We have an embedded data driven instruction process where data is reviewed and instructional decisions are made based upon data. Formative assessment is an inherent part of our process.





Equip people with structured PLCs, and training on how to look at data, goals/outcomes.

Heather Anguiano

Democratization

Data is a tool, and as long as that tool is held closely in the hands of perceived experts, it will never deliver on its potential. Data democratization borrows from the political idea of self-determination. Creating capacity across your workforce will enfranchise data users so they can fulfill their purpose and do not have to depend on specialists. The panelists we consulted shared some tips for giving data power to the people:

- Be generous with access and training so that data users are able and capable to do data work.
- Be intentional about inviting many voices to interpret and analyze data.
- Create universal data analysis tools that can be used by individuals and groups.
- Offer training on data ethics and best practices to all potential users.
- Create systems for users to report their data insights to promote collaboration and divergent thinking.



Sit with people and discuss it. Raw data is only as good as the interpretation of it. If one person looks at data and interprets it erroneously, all actions may lead to no further progress. Many eyes make better work!

Stacy Egar-Converse



Have a clear plan, train your teams on it, and have a template. We use Tableau that pulls from Illuminate and it's so powerful!

Maya Roth-Bisignano



Include the audience (teachers, etc.) in going through the process with you. Use color-codes, charts, sticky-notes, etc., to make data use as easy and manageable as possible. Data walls with sticky-notes have allowed us to constantly manage ever-changing data with student progress.

Vicki Wilson

Examination

Raw data is necessary, but not sufficient. It isn't enough to tabulate or aggregate results and perform basic averaging calculations. Useful examination looks for patterns, meaningful trends, and correlations between variables. As they have become role model data users, our panel of educators suggest these best practices for data examination:

- Create a common "data analysis vocabulary" and use it consistently.
- Adopt and distribute data visualization templates for individuals and teams.
- **Define common data patterns** (such as trends, comparisons, correlations, effect size, etc.).
- Establish a data analysis sequence to guide gathering, analyzing and applying data insights.
- Match mathematical data treatments (averages, trends, etc.) with quantitative data and narrative data treatments (sentiment analysis, word frequency, etc.) with qualitative data.



We take the student data and break it down into skills, which then allows us to create instructional materials or activities that help us fill the gaps of the low-performing students.

Stacey Egar-Converse



Use a combination of individual and shared review of the data that is then translated into TEAM lesson plans.

Dilhani Uswatte



All of our behavioral and academic interventions are informed and adjusted through the use of data.

Bret Domstrand

Application

Data that has a "landing place" is much more powerful than unanchored information. In a classic case of a solution looking for a problem, unsolicited and non-applied data can cause more problems than it solves. On the other hand, when data is collected and analyzed because it is being applied to a meaningful problem, users are more likely to follow good data collection and documentation protocols. Our panel of data leaders advise us to:

- Make sure you know what question you are trying to answer before you collect data.
- Identify a "data customer" and seek to understand their intended use.
- Clarify the difference between inputs and outcomes so you know which data you want.
- Set expected level and performance targets before you measure performance.
- Create a flowchart or process map that indicates when data enters the decision.
- Plan time in other meetings and routines to apply data to normal business decisions.



We do monthly progress monitoring and data analysis meetings. We then target students who are performing below level and we move students who are performing well to another level.

Steve Guglich



Through the PLC process, campuses use data to drive instructional planning and intervention planning.

Ron Redden



Our reading intervention program is completely data-driven and it required completely revamping our schedule, how we group students, and how the intervention is provided. Teachers now share students between classrooms (in non-covid situations) and have leveled activities which have required teachers to research and create new instructional strategies.

Vicki Wilson





We are embracing a K-12 SEL curriculum and it was chosen because of feedback from families and students about how important it is to support their children.

Maya Roth-Bisignano



All of our behavioral and academic interventions are informed and adjusted through the use of data.

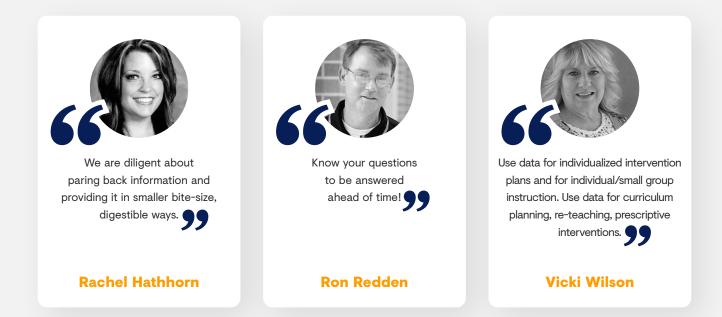
Bret Domstrand

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Simplification

Most educators do not have, or desire to develop expertise, in technical statistical vocabulary. They are much more confident with the language of goals, targets, levels, and trends. Data simplification requires data leaders to be relentless about word choices and designing for simplicity and clarity. Removing every bit of jargon and all unnecessary visual elements helps users focus on the essence of the data. The leaders who make up our panel are all capable of sophisticated and complex data discussions, but their recommendation is to simplify by consistently following guidelines:

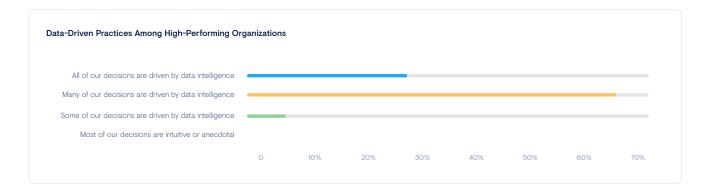
- **Prefer simpler, common language.** Instead of referencing "measures of central tendency" or "standard deviation" use natural language and phrases.
- For data that may change over time, focus on the relevant movement (trajectory) and what the boundaries are (lower limit or upper limit) for expected performance.
- Label specific data treatments and targets so all data creators and consumers are using the same language.
- Be completely intentional and as consistent as possible about how you use scales, color, shading, and line types to represent data in graphs and charts.
- **Consider "test-driving" your data** with an audience that may not have much experience with data discussions to see how they understand and interact with the content.



Leader Action Priorities for 2021

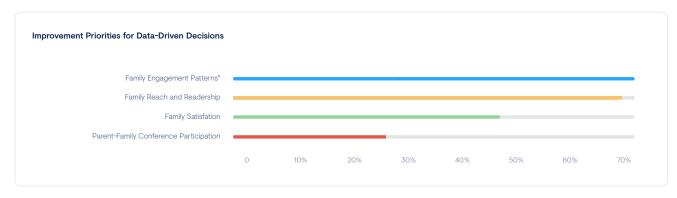
When ClassTag sought to learn about best practices for data leadership, we intentionally sought out high-achieving executives who had demonstrated excellence for many years. Our panelists represent organizations that deliver mature performance, so their priorities and observations are helpful for all organizations that aspire to supercharge success with data-driven leadership.

WHAT IS YOUR ORGANIZATION'S PRACTICE OF DATA-DRIVEN DECISIONS?



What this graph shows us is that high-performing organizations are either completely or highly committed to using data intelligence as a leadership tool. Comparing your organization's practices to these role model benchmarks may help set your priority for improving your data culture.

Even in a culture of high performance and high data utilization, there may be gaps and unmet potential. We asked our panel of leaders about that, and here are their priorities:

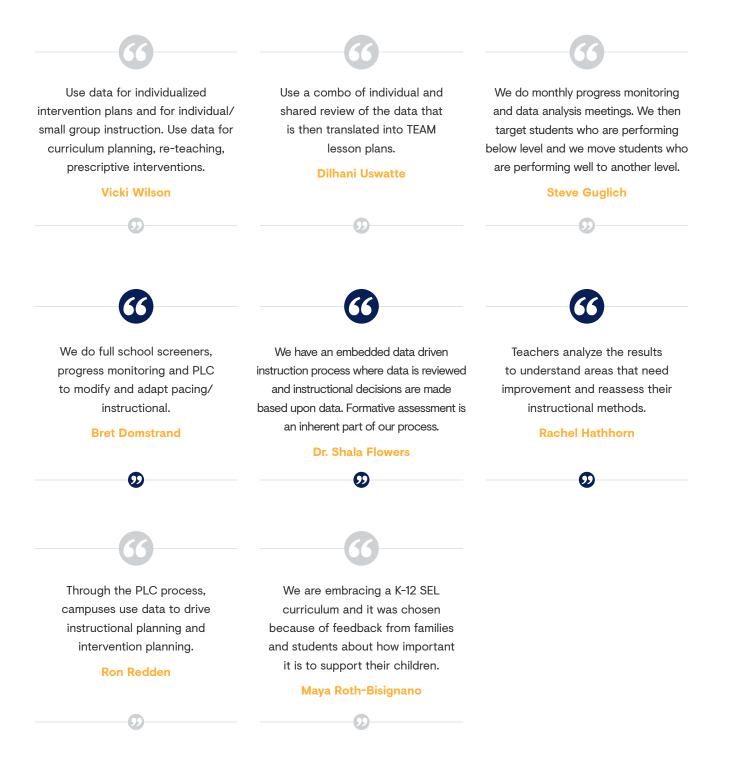


*Family engagement includes frequency of touch points, comments, two-way communication, etc.

All of our panelists recognize that data about family engagement with the district represents a gap in our data intelligence systems. Even though these are high-performing leaders, they reported low confidence (rating 3.1/5) in the current application of family engagement data.

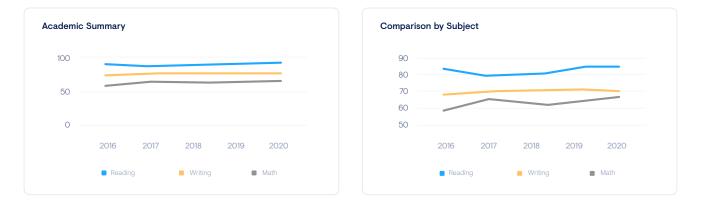
Bringing IDEAS to Life Through Practical Application

Almost all of our data experts had multiple illustrations about success with data. Here are a few examples to spark your thinking about how data can drive improvement in your situation:



Powerful Data Visualization Techniques

Many discussions about school data involve some sort of data visualization, from a simple line chart to a complex infographic and even including interactive dashboards. How leaders represent data can have a major impact on how that information is perceived and what decisions are made.



Consider these two graphs, which is more informative?

The data itself is identical, but the first chart uses the full 0-100 point scale and a neutral title. The second chart uses a compressed vertical scale, and the title emphasizes and invites a comparison of the three subjects. Elements as minor as the chart title and the scale of the axis have power to change the look and impression of a data set. Be very attentive when using off-the-shelf spreadsheets and visualizers, as they may change the scale without your input—leading to false equivalence and misinterpretation.





Note how the math graph is titled improvement, while the reading graph uses the more neutral term of performance. Also, consider how the positive connotation of a green line vs. a red line might influence perception. Finally, note how the scale and position of the two charts makes it seem like math performance is superior, when the opposite is actually true.

Data visualizations done well can be very powerful and support efficient and clear data-driven decisions, but leaders must be scrupulous about viewing the information with fresh eyes, or asking someone to interpret the graphs to determine if they are communicating effectively.

Using Visualization to Convert Data into Information

Color Can Be Key

One of the key tools in every data leader's kit—is color. Omitting color and including spot color can both be very clarifying. Consider how the first graphic leaves historical data in shades of grey, and focuses the current year with color. In the second chart, the spot color highlights the best and worst performance over the last five years, with a compressed scale to make the distinctions more obvious.





A similar technique applies to tabular data, where using traditional formats like bold or underline might distort the table, but colored text or colored cells are ideal. In the following table, the reading row uses a saturated fill color to indicate low and high performance; the writing row uses text color only; and the math row uses a combination. All three rows include a small graphic called a sparkline to reinforce the pattern in the table.

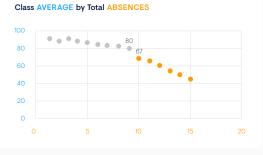
	2016	2017	2018	2019	2020	
Reading	82	79	81	84	85	•
Writing	68	70	70	71	70	•
Math	58	64	62	64	65	•

Every visualization across this section is based on the same, simple data set. But every visualization supports different insights and could contribute to different conclusions. Graphics do not have to be designed perfectly, but they must be designed purposefully.

As you consider how to lead your organization to implement the five IDEAS about data intelligence, don't underestimate the power of visualization. Choosing the right kind of chart, titling it correctly, coloring it appropriately, and scaling the content are all ways to preserve integrity, simplify presentation, and engage the entire audience to democratize the data.

Choose Your Chart Thoughtfully

- Line charts are great for showing trends over time.
- Column or bar charts are effective for comparing levels.
- Pie charts show how components compare to each other.
- Scatter plots like the one on the right show a correlation between two variables.
- Sophisticated designers can create very complex and data-dense visualizations, but beware! Simplicity trumps sophistication for most school data purposes.



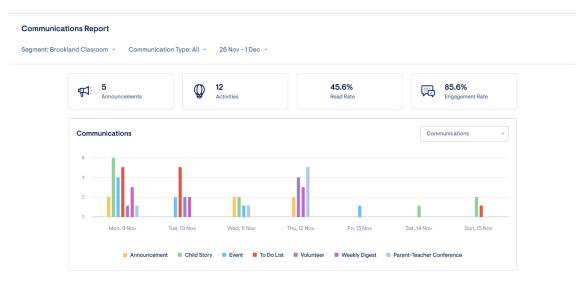
ClassTag Connect Puts You in the Data Driver's Seat

In education there's a proverb that "when the student is ready, the teacher will appear." In data science, there's a similar maxim that data answers emerge once we know what questions need answering. With that principle in mind, ClassTag has set out to create a data platform that answers important questions about district family engagement. Even the data leaders we consulted observe a lack of clear data about family engagement, expectations, and satisfaction. ClassTag Connect provides communications, reports, and visualizations that meet the emerging needs of families and districts.

For example, the Connection Health Report displays how well a teacher, school, or district is maintaining interactions with family systems. With the ability to filter by home language, individual teacher, and many other relevant factors, this data tool supports the Data IDEAS that characterize applied data intelligence.



Similarly, the communications report is a great way to log and document how implementation is matching plans, and whether there are any significant correlations between communications and performance. Both of these reports deliver high fidelity data that meets standards of best practice for data intelligence leadership.





About ClassTag

ClassTag and **ClassTag Connect** are the leading parent engagement platforms for teachers, schools and districts.

Students at-Risk		95 10% Awaiting Confirmation		345 35% No contact
980 Students	C	295 30 Unresponsiv		245 25% Uncontactable
Student Name	Phone	Email	Арр	
	~	~	~	UNCONTACTABLE
		~	~	NO CONTACTS
	~	~		UNRESPONSIVE

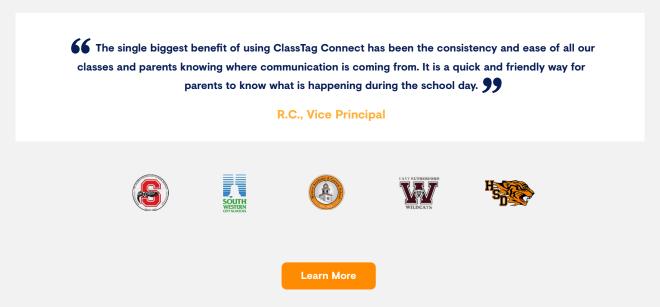
Communicatio	ons		ive Teachers nost weeks with 2+ An	nouncements		
1		1. Teacher	John Davis			
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			Oliver Winters			
		5. Teacher	Iren Koletzki			
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The platforms help teachers and administrators reach every family and fuel meaningful two-way parent engagement while providing actionable reports, equitable ways to engage every family and seamless integrations with existing district tech.

To learn more: classtag.com/connect

It's the fastest growing parent engagement platform for K-12 education,

over 25,000 schools connecting with over 5 million families.



Or email us at connect@classtag.com

